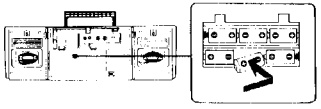
Power Sources

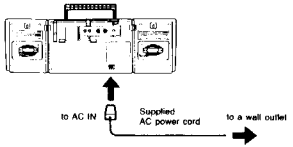
Batteries

Insert six size D (R20) batteries.



House Current

Connect the supplied AC power cord to the AC IN jack.



Note

- The unit cannot be operated on batteries when the AC power cord is connected to the unit.
- When OPR/BATT (operation/battery) indicator glows faintly, replace all the batteries.
- For critical recording, operating the unit on AC power is recommended.

Specifications

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 3.2-ohm loads, both channels driven, from 150–10,000 Hz; rated 1.8 W per channel minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

OTHER SPECIFICATIONS

Frequency range	FM: 87.6–108 MHz AM: 530–1,710 kHz
Recording system	4-track 2-channel stereo
Frequency response	80–8,000 Hz
Speakers	Two way Approx. 10 cm (4 inches) dia. woofer × 2 Approx. 2 cm (13/16 inch) dia. tweeter x2
Power output (model for Canada)	2.1 W + 2.1 W (at 10% harmonic distortion) in DC operation
Input	CD/LINE IN jacks (stereo phono jacks) (2) Input impedance 47 kilohms Sensitivity 0.44 V
Output	Headphones jack (stereo minijack) for 8–300-ohm impedance headphones
Power requirements	120 V AC, 60 Hz 9 V DC, six size D (R20) batteries
Battery life	Battery / FM recording Sony SUM-1 (NS) / Approx. 18 hours Sony AM1 (N) alkaline / Approx. 30 hours
Dimensions	Approx. 605 x 195 x 160 mm (w/h/d) (23-7/8 x 7-3/4 x 6-3/8 inches)
Weight	Approx. 4.5 kg (9 lb 15 oz) incl. batteries
Accessory supplied	AC power cord (1)
Optional accessories	Sony "MDR" headphones series Head demagnetizer HE-5C Cleaning kit KK-4

Design and specifications subject to change without notice.

Troubleshooting Guide

The unit does not operate
- No batteries in battery compartment.
- Batteries installed incorrectly.
- Weak battery. Replace all batteries.
- The AC power cord is not connected.

Cassette cannot be inserted
- Cassette is being inserted improperly.
- ▶ is depressed.

● cannot be depressed.
- No cassette in the cassette holder.
- The cassette inserted has tab removed. Use other cassette or cover slot with plastic tape.

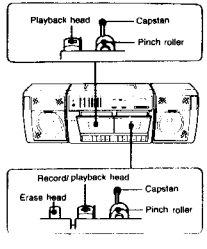
Tape doesn't move
- PAUSE is depressed.
- Weak battery. Replace all batteries.

No sound from speakers.
- Headphones are plugged in.
- The VOLUME control is turned down completely.
- The FUNCTION selector setting is incorrect.

▶ cannot be depressed.
The tape is wound completely to the right reel.

No audio from one channel or unbalanced left and right volume
Incorrect setting of the BALANCE control.

Sound drop-outs, loss of high frequencies, or excessive noise.
- Dirty heads. Clean the illustrated portions with a cleaning tip slightly moistened with cleaning fluid or alcohol.
- Demagnetize the heads and all metal parts in the tape path with a commercially available head demagnetizer.



SONY

3-751-942-21 (2)

Radio Cassette-corder

CFS-W320

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

OWNER'S RECORD

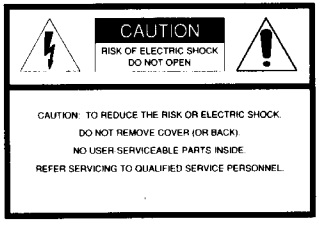
The model number is located at the rear and the serial number is located in the battery compartment.
Record the model and serial numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. CFS-W320 Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

SHOCK HAZARD-DO NOT OPEN


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OR ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Sony Corporation © 1990 Printed in Korea

Precautions

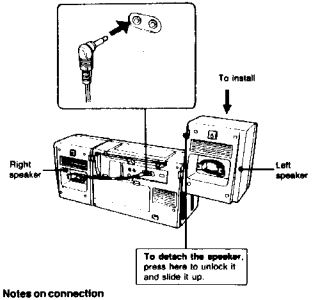
Notes on Power Sources
- Use six size D (R20) batteries or, for AC operation (120 V AC only), the supplied AC power cord.
- Remove batteries when not in use to avoid damage from battery leakage.
- Unplug the unit from the wall outlet when it is not to be used for an extended period of time.

Handling the Unit
- Avoid exposure to temperature extremes, direct sunlight, dust, or mechanical shock.
- Should anything fall into the unit, immediately unplug the unit (or remove batteries) and have it checked by qualified personnel before operating again.
- Do not lift the handle when the telescopic antenna is extended.
- When the unit has not been used for a long time, set it in the playback mode for several minutes before inserting a cassette.

Note on Cassette
Use of cassettes longer than 90 minutes is not recommended except for long continuous recording or playback.

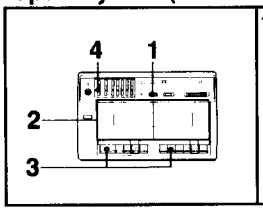
If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

Connecting Speakers

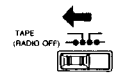


Notes on connection
- Turn the power off before connecting or disconnecting the speaker cords to avoid the speaker's being damaged by a sudden burst of sound.
- Connect the speaker cord of the right speaker to the RIGHT jack and the left speaker to the LEFT jack.

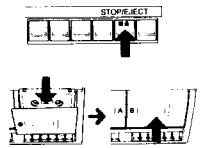
Tape Playback (either deck)



1



2 Insert a cassette



3

4 Adjust VOLUME, BALANCE and GRAPHIC EQUALIZER, if necessary.

To stop playback

To wind tape rapidly	▶▶
To rewind tape rapidly	◀◀
To stop playback/recording	■⏏
To release ▶▶ or ◀◀	■⏏
To pause playback/recording	❚❚

Be sure to press ■⏏ to release ▶▶ or ◀◀ at the tape end.

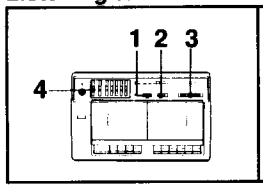
Listening to or recording from other component (CD player, eg.)
Connect the other component to the CD/LINE jacks of this unit with the connecting cord RK-C74A (optional) and set the FUNCTION selector to CD/LINE IN.

Notes
- During playback, avoid pressing the PLAY/REW/FF buttons of the other deck since the playback speed may vary.
- When both decks A and B are in the playback mode, only playback from deck B will be audible.

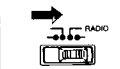
For private listening
Connect stereo headphones to PHONES jack.

When the unit is in use
OPR/BATT (operation/battery) indicator lights. Intensity of glow shows battery level.

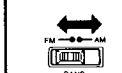
Listening to the Radio



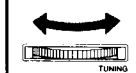
1



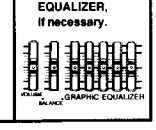
2 Select the desired band.



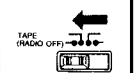
3 Tune in a desired station.



4 Adjust VOLUME, BALANCE and GRAPHIC EQUALIZER, if necessary.



To turn off the radio

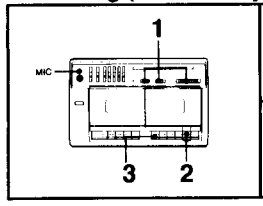


Antenna adjustment

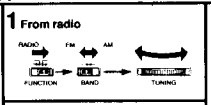
FM

AM

Recording (deck B only)

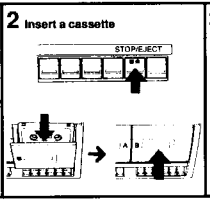


1 From radio

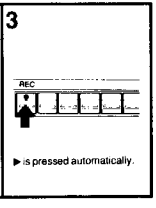


1 From built-in microphone

2 Insert a cassette

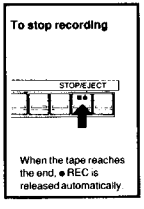


3



▶ is pressed automatically.

To stop recording



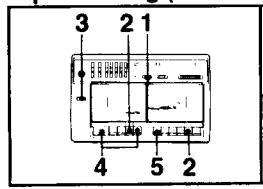
When the tape reaches the end, ● REC is released automatically.

Graphic equalizer adjustments
These are the frequency coverages of the equalizer controls.

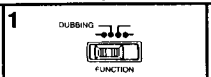
100 Hz:	bass
300 Hz:	speaking voice, middle frequencies of instrumental music
1 kHz:	singing vocals. Boost for increased "presence."
3 kHz:	overall brightness of sound
10 kHz:	general treble. Lower to reduce noise. Raise control to emphasize a frequency band, lower to deemphasize.

Notes on recording
- While recording, avoid pressing the PLAY/REW/FF buttons of deck A to assure stable recording.
- If a whistling noise is heard during AM recording, which was inaudible before the record button is depressed, set ISS/FM MODE on the rear panel to 1, 2, or 3, depending on which one best reduces the noise.
- While recording from the built-in radio, you can listen to the program through speakers or headphones. While recording with the built-in microphone, the sound being recorded can be monitored through headphones.
- No recording level adjustment is necessary.

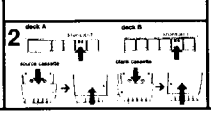
Tape Dubbing (deck A to deck B)



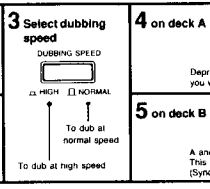
1



2



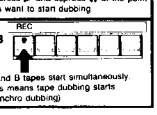
3 Select dubbing speed



4 on deck A

Depress ▶ and depress ❚❚ at the point you want to start dubbing.

5 on deck B



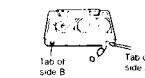
A and B tapes start simultaneously. This means tape dubbing starts. (Synchro dubbing)

To stop dubbing
on deck A and deck B

After dubbing, set FUNCTION to TAPE (RADIO OFF).

Notes on dubbing
- If deck A's tape finishes first, deck B will continue playing. (Manually press ■⏏ to release locked buttons).

To prevent accidental erasure
To protect side A recording
Break off the tab of side A.



- If deck B's tape finishes first, deck A will continue playing.
- Do not change the dubbing speed during dubbing. As this causes excessive wow and flutter.

To reuse a cassette
Cover each slot with plastic tape.